Lights, Camera, Action: Space Physics at the Movies

One of the most spectacular events at the 2000 Fall Meeting in San Francisco was certainly the showing of the IMAX film, "SolarMax." The film, co-produced by long-time AGU member Bob Eather, was shown at the Sony Metreon Theater near the Moscone Center. The 40-minute film features stunning images of solar coronal mass ejections that place the viewing audience directly in their path toward the Earth. The images, which were acquired by imagers on the SOHO spacecraft, dominate the solar sequences and show the structured, dynamic properties of the star. Nevertheless, for those of us who prefer a more traditional view of the Sun, "SolarMax" also includes beautiful terrestrial sunrise and sunset scenes.

A unifying theme runs through the film: all life on Earth depends on the Sun. This is illustrated with a sequence photographed in Greenland where a drop in temperature of a few degrees a thousand years ago was sufficient to freeze over bays and make life unsustainable for the Viking colonies established during preceding warmer centuries. The importance of the Sun in human affairs was recognized from earliest times. Stone inscriptions in Ireland, shrines in Japan, and a special edifice on Machu Picchu in Peru, to identify the beginning of the year at winter solstice help to illustrate the dominant theme. The photography at Machu Picchu is superb.

A convincing argument is made for more widespread use of solar energy in the form of wind and solar cell panels. The latter is illustrated by an aircraft driven solely by solar energy. The IMAX format is particularly effective in enhancing realism in auroral displays, of which there are several beautiful sequences. Experiencing the motion of auroral arcs and bands from their origin on the horizon to overhead and beyond is precisely what is seen when watching the aurora in the cold Arctic (or Antarctic) regions.

The film is highly educational in both the scientific and historical sense. The evolution from a geocentric Aristotelian world view to a heliocentric Copernican one is well developed and illustrated.

The IMAX format lends a level of realism to the many scenes that could not possibly be achieved by conventional films. The amount of work that has gone into making "SolarMax," from initial shooting to final production, is very apparent, and the result is spectacular. The producers are to be congratulated. I enjoyed watching the film the second time even more than the first.

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Reviewer

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